Remarks

Election/Restrictions

In the Office Action, the Examiner has noted that claims 1-13 and 15-56 are subject to restriction. In particular, the Examiner has given a two-way restriction in accordance with PCT Rule 13.1 as follows:

Inventions	*Class/Sub-class*
Group I. Claims 1-10 and 13-56, drawn to 1,2-diazine fused to indole (tricyclic).	None provided
Group II. Claims 11-12, drawn to indoles.	None provided

As indicated above, through this response, Applicants provisionally elect invention Group I ***with traverse***, namely, claims 1-10 and 13-56, drawn to 1,2-diazine fused to indole (tricyclic). In addition, as noted by the Examiner, Applicants further elect provisionally with traverse a sub-generic species falling within the scope of invention Group I to be a compound of formula I, wherein X = halogen, Het = pyridinyl, $R_1 = R_2 = R_3 = C_1$-C_4 alkyl. A single compound within the scope of this sub-generic species is 7-fluoro-*N*,*N*,5-trimethyl-4-oxo-3-(pyridin-2-yl)-3,5-dihydro-4*H*-pyridazino[4,5-*b*]indole-1-acetamide, which is Example 1 (Compound 1) found in the specification at page 10, line 18 to page 14, line 2. Please note that all of claims 1-10 and 13-56 read on this elected subgeneric species. Examiner's imposition of two-way restriction is respectfully traversed below.

Applicants respectfully submit that this two-way restriction as imposed by the Examiner is improper based on the following grounds:

1. There is no undue burden on the Examiner to search for all of the claims as they are believed to be in same classification.
2. There was no lack of unity of invention imposed on the corresponding PCT Application No. PCT/FR03/001027 (WO 03/082874).

Now, we address each one of these issues in greater detail. First, Applicants respectfully submit that the search of all of the claims 1-13 and 15-56 should not impose any undue burden on the Examiner. Applicants assertion is based on the fact that all of the invention groups are believed to be in the same search class and sub-class. However, as summarized in the Table above, the Examiner has not provided any specific class and/or sub-class so that Applicants could make a definitive assertion on this. Nevertheless, it is important to note that invention Group I is directed to a class of compounds of formula (I) and invention group II is drawn to indoles, which are directed to two specific types of intermediates used to make compounds of

formula (I). Thus it is submitted that when the Examiner is searching for invention group I, that itself will facilitate the search of the other invention group, i.e., invention Group II. Thus, it should not impose any undue burden on the Examiner to search both inventions together. Therefore, Applicants respectfully submit that both inventions be rejoined and examined together.

Secondly, Applicants respectfully submit that the instant application is a national phase entry of International Application No. PCT/FR03/001027 (WO 03/082874), for which there was no lack of unity of invention as determined by the EPO, which was the examining authority in this case. A copy of the English translation of the International Preliminary Examination Report (IPER) is enclosed herewith for Examiner's review. The IPER has been issued based on the original claims 1-15 presented in the PCT application. The instant claims 1-13 and 15-56 in the present application are by far same as the original claims 1-15, and have been re-written in the US format. Therefore, it is respectfully submitted that similar standards as used in the international examination be used in the instant application and this imposition of restriction requirement be withdrawn.

In the event the Examiner wishes to contact the undersigned regarding any matter, please call (collect if necessary) the telephone number listed below.

Applicants believe there are no fees due for this response. However, if the Examiner deems that fees are due, please charge these fees to Deposit Account No. **18-1982** for sanofi-aventis U.S. LLC, Bridgewater, NJ. Please credit any overpayment to Deposit Account No. **18-1982**.

November 14, 2006

Respectfully submitted,

Balaram Gupta

Balaram Gupta
Registration No. 40,009
Attorney for Applicants

Enclosure: A copy of English translation of IPER of WO 03/014095 (4 pages)

sanofi-aventis U.S. LLC
US Patent Operations
Route #202-206 / P.O. Box 6800
MAIL STOP: BWD-303A
Bridgewater, NJ 08807-0800
Telephone: 908-231-3364
Telefax: 908-231-2626

Translation

PATENT COOPERATION TREATY

PCT

WO 2003/082874

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference SSL0065/AB	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/FR2003/001027	International filing date (*day/month/year*) 02 avril 2003 (02.04.2003)	Priority date (*day/month/year*) 03 avril 2002 (03.04.2002)
International Patent Classification (IPC) or national classification and IPC C07D 487/04		
Applicant SANOFI-AVENTIS		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
22 octobre 2003 (22.10.2003)	25 March 2004 (25.03.2004)
Name and mailing address of the IPEA/EP Facsimile No.	Authorized officer Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/FR2003/001027

I. Basis of the report

1. With regard to the **elements** of the international application:*

☐ the international application as originally filed

☒ the description:

pages 1-18, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

☒ the claims:

pages 1-15, as originally filed

pages _____, as amended (together with any statement under Article 19

pages _____, filed with the demand

pages _____, filed with the letter of _____

☐ the drawings:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

☐ the sequence listing part of the description:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* *Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).*

** *Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.*

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-10, 12-15	YES
	Claims	11	NO
Inventive step (IS)	Claims		YES
	Claims	1-15	NO
Industrial applicability (IA)	Claims	1-15	YES
	Claims		NO

2. Citations and explanations

The following documents cited in the international search report are considered relevant to the examination of the present application. Their numbering will be maintained throughout the rest of the procedure:

(1) WO-A-99 06406
(2) WO 00 44384, cited in the application

1. Novelty

Inasmuch as the pharmaceutically active compounds of the application differ from the compounds described in documents (1) and (2) by virtue of the presence a heterocycle instead of phenyl ring in position 3- of the pyridazino-indole ring, the application according to claims 1-10, 14 and 15 can be considered novel over the content of these two documents.

The same does not apply to claim 11 which, in view of the content of (1), is not novel.
Indeed, (1) (see (1), page 3, compounds (III) and the definitions of X, R_1, R′ and R″ mentioned in the text, pages 1 and 2 of (1)) describes teaching relating to intermediate compounds of type (III), which encompasses

the teaching relating to the compounds mentioned in claim 11 in its present form. Claim 11 is therefore devoid of novelty over the content of (1).

Intermediate claims 12 and 13 are novel over the content of (1) and (2).

2. Inventive step

Inasmuch as replacing the phenyl radical in position 3 of the pyridazino-indole ring with a heterocycle can generate compounds which have the same pharmacological qualities, the application is not considered to be inventive in its present state, and the applicant will be invited to prove in the regional phase, by argumentation or submission of technical evidence, that the pharmaceutically active compounds claimed possess advantageous or surprising qualities by comparison with their phenyl-substituted homologues of (1) and (2), so that an inventive step can be acknowledged in the light of the closest prior art, i.e. (1) and (2).

3. Formal points

3.1 Document (1) should be cited and discussed briefly in the description.

3.2 Instead of defining certain radicals by referring to "the above", as in claims 8 and 10, reference should be made to a claim where these definitions are explicitly mentioned. As drafted, these claims lack clarity and must therefore be redrafted when entering the subsequent regional phase.